

Amendments to the Specifications:

Please delete the paragraph that begins at the bottom of page 1 and continues on page 2 and replace it with the following paragraph:

– The response in any particular direction can be tailored using anisotropic boundary conditions or by stretching the polymer to impose anisotropic mechanical properties about the operating point. In the case that the electroactive polymer is used above the glass transition temperature, the stretched condition must be rigorously maintained during operation. In this case, the boundary conditions can be fixed by careful application of frames and supporting elements. In any comprehensive model of the actuator, these elements must be considered. The boundary conditions often impair the strain of the actuator in more than the intended direction. This effect is often evident when soft frames are used on the film to prevent crack propagation, but also oppose the material in the direction of actuation. Many of the structural reinforcements that are used to prevent device failure or maintain a stretched configuration have structural rigidity that cannot be entirely controlled in every direction. The rigidity of these elements may have an adverse effect on the performance of the transducer and in some instances may cause device failure. Beyond the boundary, near the intersections of free and fixed boundary conditions there exists a boundary phenomenon over which the local response of the electroactive polymer can vary dramatically in comparison to the majority of the material. Many of these conditions lead to local failure of the dielectric electroactive polymer transducer (DET) during operation and should be considered during the design and fabrication of the actuator. –